RVE-2

Single-phase charging mode 1

INSTRUCTION MANUAL

(M98238801-03-12B - V2.0 Edition Març 2012**)**

E ADVERTENCIAS / SÍMBOLOS

PELIGRO 	Una conexión incorrecta del equipo puede producir la muerte, lesiones graves y riesgo de incendio. Lea y entienda el manual antes de conectar el equipo. Observe todas las instrucciones de instalación y operación durante el uso de este instrumento. La instalación, operación y mantenimiento de este instrumento debe ser efectuado por personal cualificado solamente. El Código Eléctrico Nacional define a una persona cualificada como "una que esté familiarizada con la construcción y operación del equipo y con los riesgos involucrados".
ATENCIÓN 	**Consultar el manual de instrucciones antes de utilizar el equipo** En el presente manual, si las instrucciones precedidas por este símbolo no se respetan o realizan correctamente, pueden ocasionar daños personales o dañar el equipo y /o las instalaciones.

GB WARNINGS / SYMBOLS

DANGER 	Death, serious injury, or fire hazard could result from improper connection of this instrument. Read and understand this manual before connecting this instrument. Follow all installation and operating instructions while using this instrument. Installation, operation, and maintenance of this instrument must be performed by qualified personnel only. The National Electrical Code defines a qualified person as “one who has the skills and knowledge related to the construction and operation of the electrical equipment and installations, and who has received safety training on the hazards involved.”
WARNING 	**Consult the instruction manual before using the equipment.** In this manual, if the instructions preceded by this symbol are not met or done correctly, can cause personal injury or equipment damage and / or facilities.

F WARNHINWEISE / SYMBOLE

DANGER 	Un branchement incorrect de l’appareil peut entraîner la mort ou des lésions graves et peut provoquer un incendie. Avant de brancher votre appareil, lisez attentivement le manuel et assurez-vous de bien avoir compris toutes les explications données. Respectez toutes les instructions concernant le mode d’installation de l’appareil et son fonctionnement. L’installation, le fonctionnement et la maintenance de cet appareil doivent être réalisés uniquement par du personnel qualifié. Le code électrique national définit en tant que personne qualifiée toute personne connaissant le montage et le fonctionnement de l’appareil ainsi que les risques que ceux-ci comportent »
ATTENTION 	**Consulter le manuel d’instructions avant d’utiliser l’appareil** Si les instructions suivantes, précédées dans le manuel d’un symbole, ne sont pas respectées ou sont réalisées incorrectement, elles pourront provoquer des dommages personnels ou abîmer l’appareil et/ou les installations.

D WARNHINWEISE / SYMBOLE

GEFAHR 	Durch einen nicht sachgemäßen Anschluss der Anlage können Tod, schwere Verletzungen und Brandrisiko hervorgerufen werden. Bevor Sie die Anlage anschließen, lesen Sie bitte das Handbuch durch und machen Sie sich dessen Inhalt klar. Beachten Sie bei Einsatz dieses Instrumentes sämtliche Installations- und Betriebshinweise. Installation, Betrieb und Wartung dieses Instrumentes müssen ausschließlich von entsprechend qualifiziertem Personal vorgenommen werden. Von dem nationalen Elektrocode wird eine qualifizierte Person als jemand definiert, "der mit der Konstruktion und dem Betrieb einer Anlage und der damit verbundenen Risiken vertraut ist".
ACHTUNG 	**Vor Inbetriebnahme der Anlage ist das Handbuch zu lesen.** Werden die in dem vorliegenden Handbuch mit diesem Symbol versehenen Hinweise nicht beachtet oder falsch verstanden, können Personenschäden und Schäden an der Anlage und/oder den Installationen verursacht werden.

P ADVERTÊNCIAS / SÍMBOLOS

PERIGO 	Uma ligação incorrecta do equipamento pode provocar a morte, lesões graves e risco de incêndio. Leia e compreenda o manual antes de ligar o equipamento. Observe todas as instruções de instalação e operação durante o uso deste aparelho. A instalação, operação e manutenção deste aparelho devem ser levadas a cabo exclusivamente por pessoal qualificado. O Código Eléctrico Nacional define uma pessoa qualificada como "uma pessoa que se encontre familiarizada com a construção e operação do equipamento assim como com os riscos inerentes".
ATENÇÃO 	**Consultar o manual de instruções antes de utilizar o equipamento** No presente manual, se as instruções que precedem este símbolo não forem respeitadas ou realizadas de forma correcta, podem ocorrer ferimentos pessoais ou danos no equipamento e/ou nas instalações.

I AVVERTENZE / SIMBOLI

PERICOLO 	Un collegamento errato del dispositivo può provocare morte, lesioni gravi nonché rischio di incendio. Prima di collegare il dispositivo leggere attentamente il manuale. Osservare tutte le istruzioni relative all'installazione e all'operatività durante l'uso di questo strumento. L'installazione, operatività e manutenzione di questo strumento devono essere realizzate solamente da personale qualificato. Il Codice Elettrico Nazionale definisce una persona qualificata come "colui che ha familiarità con la costruzione e operatività del dispositivo e con i rischi che ne possano derivare".
ATTENZIONE 	**Consultare il manuale di istruzioni prima di utilizzare il dispositivo** Qualora le istruzioni riportate nel presente manuale precedute da questo simbolo non vengano osservate o realizzate correttamente, possono provocare danni personali o danneggiare il dispositivo e/o gli impianti.

CONTENTS:

1 OVERVIEW

This user manual provides basic information about the electric vehicle charging unit: the RVE-2, and his different versions (MODE 1 / MODE 2 according to EN 61851-1.)

Important instructions will be shown inside a box. In some cases, these will include special symbols. Their meaning is explained next:

IMPORTANT INSTRUCTION!

WARNING! DANGER! ELECTRICAL RISK!

2 SYSTEM DESCRIPTION

The RVE-2 charge units provide to electric vehicles a plug base, up to 16A, 240Va.c, in MODE1 and up to 32A, 400Va.c, in MODE3, according to EN 61851-1 :

- **RVE-2 Mode 1:**

  - RVE-2: Outdoor recharge posts single phase with two outlets 230Va.c., 16A, 3,6kW.
  - RVE-2-COM: Outdoor recharge posts single phase with two outlets 230Va.c., 16A, 3,6kW, with RS485 communications.
  - RVE-2-IP: Outdoor recharge posts single phase with two outlets 230Va.c., 16A, 3,6kW, with RS485 and IP communications.
  - RVE-2-MOV: Outdoor recharge posts single phase with two outlets 230Va.c., 16A, 3,6kW, with RS485 and IP communications. Motorised MCB and Surge protection.

Comparing with a simple plug RVE-2 offers the following:

- Safe collection of energy for the installation's operator. Prevents fraud and misuse.
- Reliable measurement system for the user, since only the energy consumed is paid, with an accurate reading of the energy consumed.
- Protects end user against electrical risks. Current is only present in a non-interrupted charging cycle. The system is not powered during all other cycles.
- Current theft prevention function. The operation is interrupted if the socked is removed during the charging process, so that no more energy will be supplied to the base until the user is identified again. Ensure the power supply is stopped before the physical disconnection of the connector.
- Intelligent charging process (off-peak hours, distribution of power available, etc.) when complemented with the PC and in hourly discrimination periods.

The system is complemented with:

- Pre-paid cards. Available without credit (to recharge later) and pre-charged units of credit.
- Pre-paid card writer. There are two models available:
    - Compact, RVE-Term
    - Software version with USB peripheral, RVE-Soft

The RVE-2 complies with the CE requirements, and the current European Union directives for this type of equipments.

The main standards that have been taken into account during the design phase are as follows:

UNE EN 62196-1: Bases, sockets, vehicle coupling devices and vehicle access points. Electric vehicle conductive charging. Part 1: Charging electrical vehicles of up to 250A in alternating current and 400A in direct current.

UNE EN 61851-1: Electric Vehicle Conductive Charging System. Part 1: General requirements.

UNE EN 61851-21: Electric Vehicle Conductive Charging System.
Part 21: Requirements of the electric vehicle for its conductive connection to the main in *A.C. and D.C.*

UNE EN 61851-22: Electric Vehicle Conductive Charging System.
Part 22: A.C. charging station for electric vehicles.

Other Standards: IEC61000, IEC60364-4-41, IEC60884-1, IEC61010, UNE-EN55011, ISO14443A

This unit has been designed for outdoor use. It has an IP54 protection degree, in accordance with ANSI/IEC 60529-2004.

3 SAFETY INFORMATION

- Do not use connection cables that are not in perfect working order.
- Do not use the RVE-2 for other uses that have not been specified in its design, i.e., for any application that is unrelated to charging electric vehicles.
- Do not modify the RVE-2 unit. In case the unit is modified, the warranty will be void and CIRCUTOR shall not be liable for any future malfunction.
- Strictly follow the current safety regulations.
- Do not repair or install elements while the unit is powered.
- Only authorised and trained personnel can access the elements powered with voltages inside the unit.
- Check the operation of the earth leakage relay periodically (at least once a month) and always after maintenance operations.
- The installation must be checked once a year by qualified personnel.
- Any unit with defects or faults that could represent a risk to the user must be removed from service (broken plugs, lids that do not close, etc.).
- Do not use spare parts that are not original of CIRCUTOR.

4 INSTALLATION

4.1 PREVIOUS VERIFICATIONS

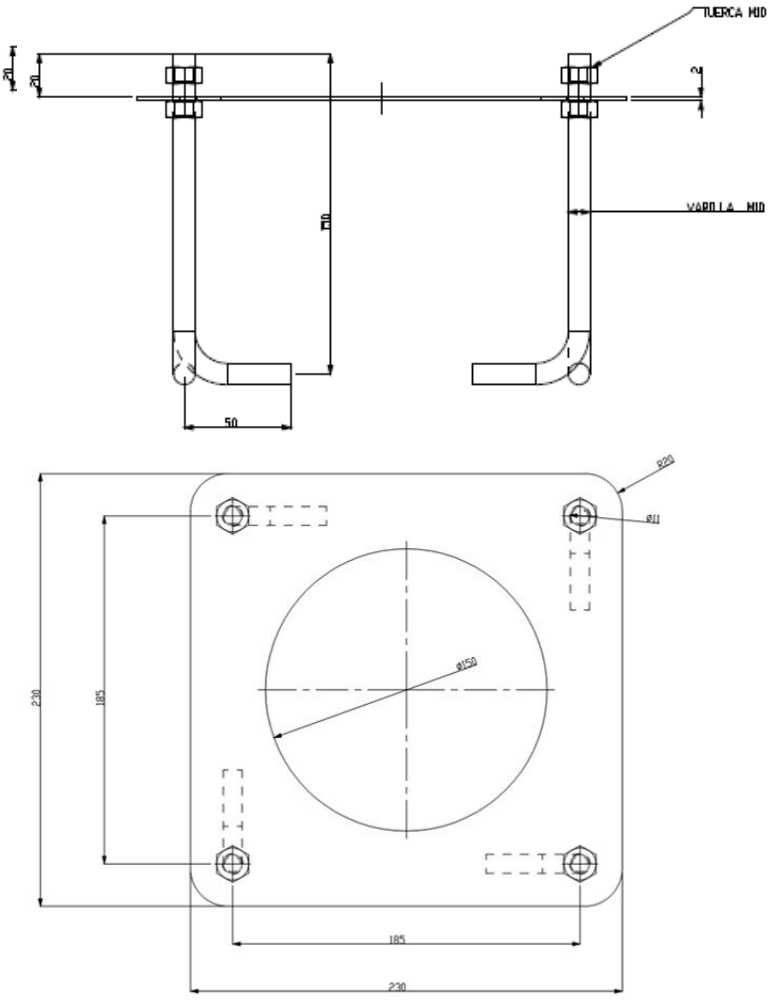
- Make sure that the materials have not been damaged during transport.
- Make sure that the voltage used on the board is suitable for the place/country where it will be operating.
- Make sure that the connection bases are suitable for the place/country where the unit will be operating.

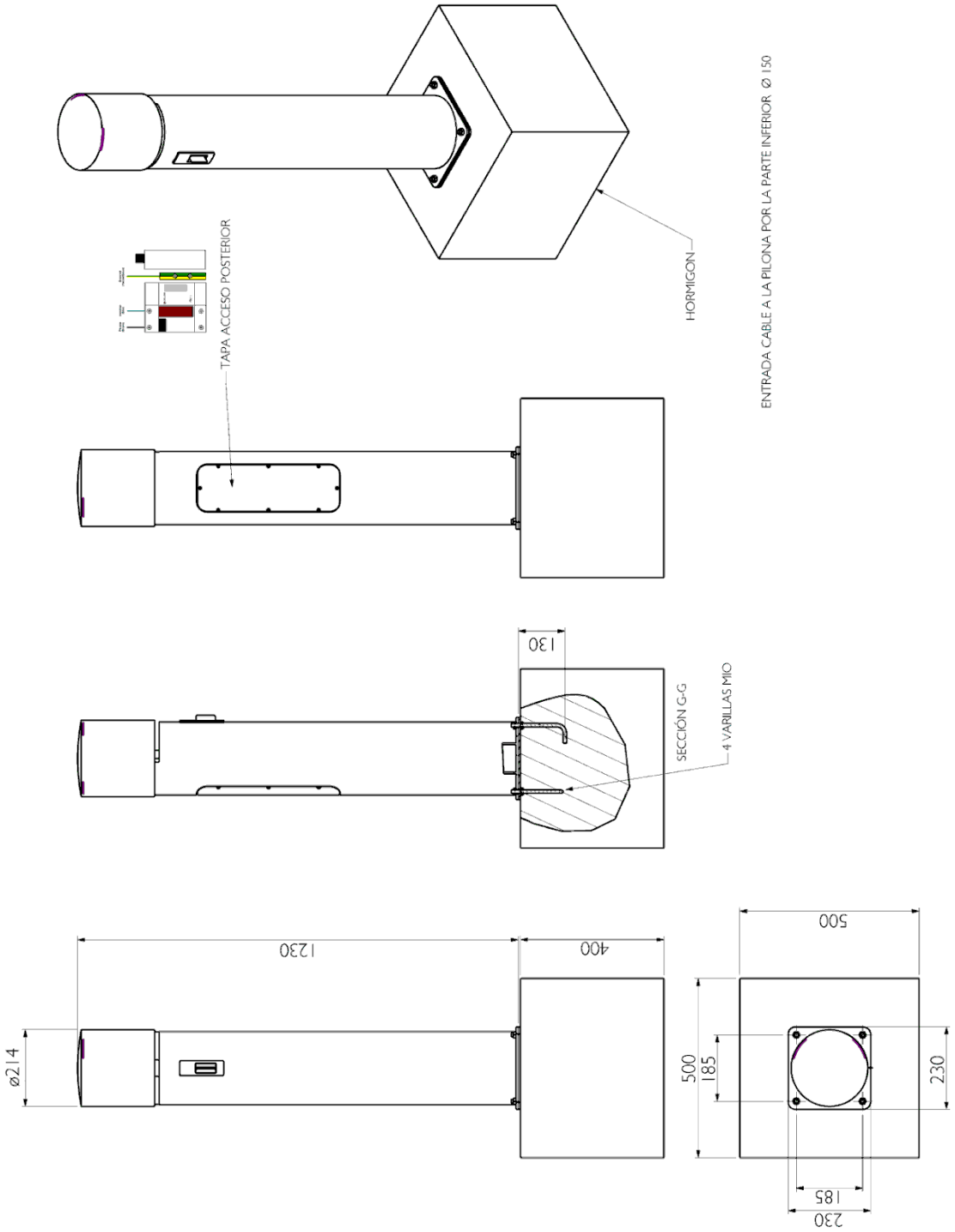
4.2 ANCHORING AND DIMENSIONS

The RVE-2 is a charge system designed to be anchored on floor. For the anchoring is provided a template and nuts with bolts to leveling. The bolts provided for the anchor must be inserted into a concrete base resistance equal to or greater than IK8, It is recommended to leave overhang surface bolts from [20.25] mm for a good anchor with the post.

NOTE: Must use Allen wrench to screw supplied appliances for proper maintenance and do not cause premature degradation.

RVE-2 Mode1:




HORMIGON
ENTRADA CABLE A LA PILONA POR LA PARTE INFERIOR Ø 150
TAPA ACCESO POSTERIOR
130
SECCIÓN G-G
4 VARILLAS MIO
1230
400
500
ø214
500
185
230
185
230

4.3 ELECTRICAL INSTALLATION. GENERAL CONSIDERATIONS

Qualified professionals must undertake all activities related to the electrical installation, regardless of whether a project is needed or not, depending on the power installed.

This unit has been designed for its use in a single-phase 230Va.c. (RVE-2) with a ±10% tolerance

In any case, the end user must be protected against indirect contact with a residual voltage relay (DDR or differences) with a sensitivity of 30mA.

The device already includes 30mA differential protection required, so if it's necessary to protect upstream, it must be selective or time sensitivity. The choice must be made by responsible for the design of the facility, so that REBT is met and to ensure maximum system availability.

This device can not be installed in places where there is a risk of explosion (explosive atmosphere).

The minimum breaking power of the automatic header switch (circuit breaker) must be 6kA.

The following layouts show the outline of the installation in blocks. They are shown for information purposes only.

The installation company will be responsible for dimensioning the section, protection elements and lengths, in compliance with the current regulations.

There is a ground terminal that must be properly wired to the conductor with the minimum section of 6mm^2. IT IS VERY IMPORTANT ITS RIGHT CONNECTION AND ITS DIMENSIONS.

The minimum section of the conductors must be 6mm^2, but that will be in function of the installation conditions (length, ducts,…) may be higher. Consult REBT or the appendices. The responsibility for the installation corresponds to the authorized installer that designs and makes.

Depending on the model, the device is able to communicate by Rs-485 compatible devices, so it will be able to send and receive commands or information.

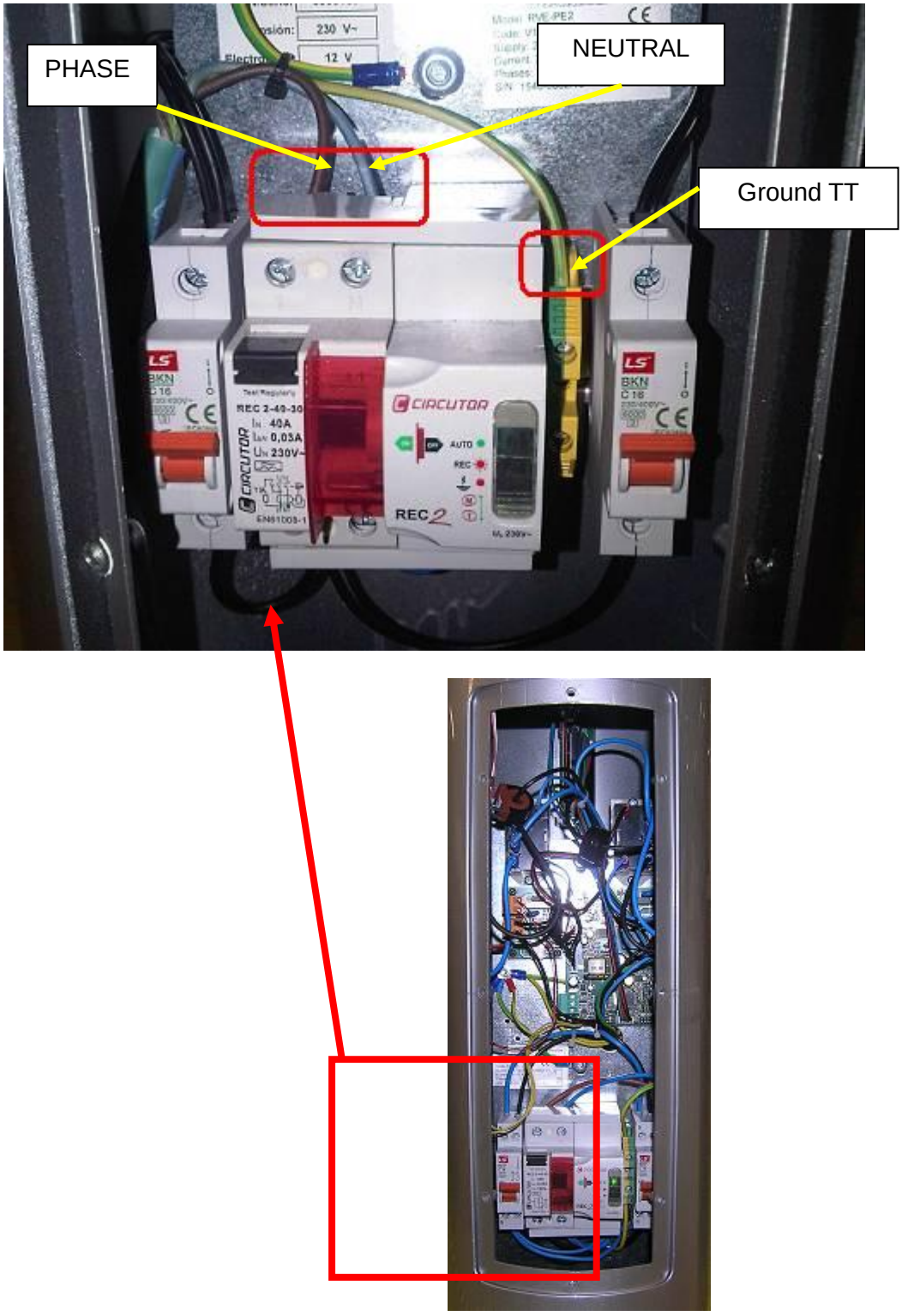
The RS-485 network installation must follow the requirements that the standard prescript, among others, the linear topology, end of line resistor, shielding, equipotential mass, ...

Such communication can be enhanced by connecting to R-440 module or multipoint system; data can then be stored and accessed via Ethernet.

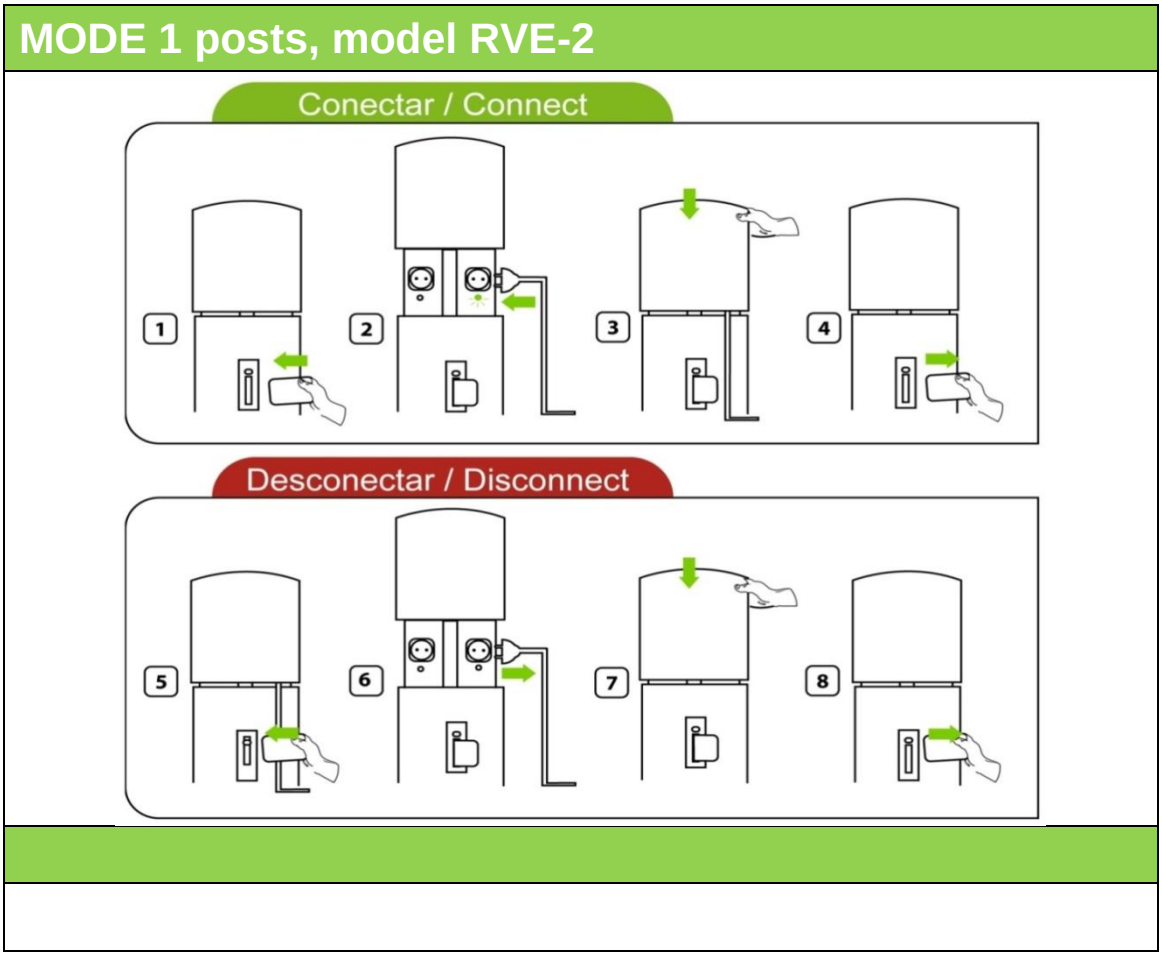
Diagrams and technical information can be found in paragraph 6 of Maintenance.

4.3.1 16 A Single-phase electrical installation - RVE-2 Mode 1

RVE2 equipment installation consists of connecting the outlet of 230V single phase. The phase and neutral are connected to the RCD "REC2" and earth ground to terminal, as shown in the picture.



5 USER GUIDE



5.1 NORMAL CHARGE OPERATIVE

The following explanation refers to loans used but as a symbol €.

In countries where the currency has a similar magnitude to the EURO (€) can be considered as 1 € or 1 credit.

In countries where the currency is very different order of magnitude to the EURO (€), a conversion can be easily calculated, which for example is 1 credit = 1000 local units. In that case, speaking of credit makes more sense.

5.1.1 Start of a charge cycle

1. Present the RFID card to the reader.
2. After a while displays the credit value.
3. If the claim is correct, a deposit is deducted from the card (16 credits default) and transferred to the charge.
4. The hat gets up.
5. The flashing led indicates the power socket available.
6. Connect the charge.
7. Get down the hat.
8. Remove the card.
9. The system connects the power and starts the control of credit as the energy consumed.
10. The display shows a segment simulating a twisting motion with a speed proportional to power output.

5.1.2 End of charge cycle (Normal end)

1. Present the RFID card to the reader.
2. Cycle is interrupted and the hat gets up.
3. Disconnect the charge and get the hat down.
4. The credit not consumed is retrieved to the card. “xx”€
5. Displays the credit. “xx”€
6. Remove the card.

5.1.3 End of charge cycle (end of credit)

1. If it’s displayed “o” stopped, indicate that the system has stopped the charging cycle.

   Digit 1, channel one NO active. Digit 2, channel two NO active.

2. Present the RFID card to the reader and the hat gets up.
3. Disconnect the charge and get down the hat.
4. The credit is retrieved to the card. “00”€
5. Display shows the credit. “00”€.
6. Remove the card.

5.1.4 End of charge cycle (missing charge end)

1. If it's displayed "o" stopped, indicate that the system has stopped the charging cycle.

   Digit 1, channel one NO active. Digit 2, channel two NO active.

2. Present the RFID card to the reader. The hat gets up.
3. Disconnect the charge and get down the hat.
4. The credit not consumed is retrieved to the card. "xx"€.
5. Display shows the credit. "xx"€.
6. Remove the card.

This end of charge can only be given one minute past the start of the cycle, if there is no power consumption.

5.2 RETRIEVE CREDIT OPERATIVE

(Following Interruption of the charging cycle through no fault of the user)

After the interruption outside the client, when it returns to recover the debt, it is available, whether or not in use the unit for another client, the following operations:

5.2.1 Card interrupted previous cycle

1. Present the RFID card to the reader.
2. The system looks for the target on to the "TAG" code buffer.
3. Once found retrieves the value of credit that user had before the cycle was interrupted.
4. Once you update the card, the display shows "rC.
5. Remove the card.
6. The reader unsubscribes in the buffer the "TAG" code of the card.

Once retrieved the credit the card is ready for a new charge cycle.

5.3 MISSING CREDIT OPERATIVE

5.3.1 Star of charge cycle

1. Present the RFID card to the reader.
2. After a while it displays the credit value.
3. If the credit is not correct, the display show “00”€ during 2s and doesn’t start any new cycle.
4. Remove the card.

5.3.2 Display indications

“rC” – Credit retrieve.
“Ex” – Error x.

“ . ” – Channel indication that it is on resting time. (During this time there is no reading card for this channel.

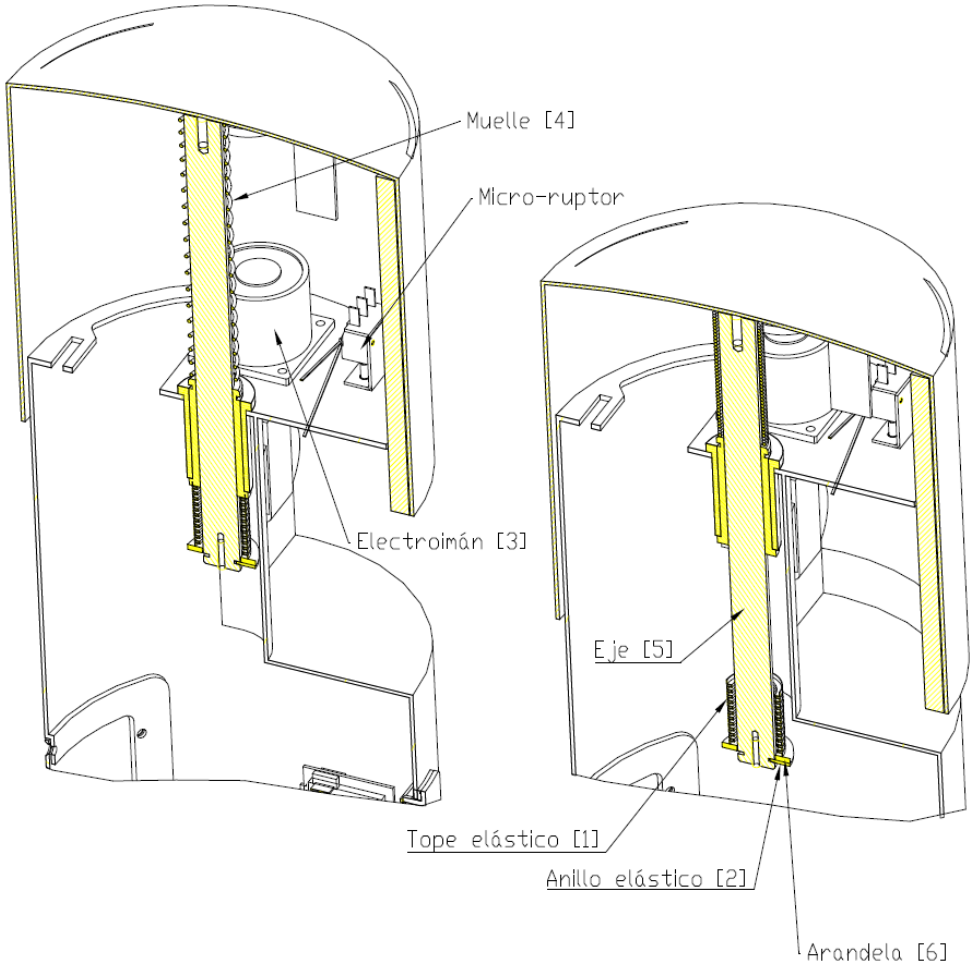
“ o ” - The output is on charge cycle if oscillates vertically. Stationary cycle, while standing.

6 MAINTENANCE

6.1 GENERAL DESCRIPTION

The vehicles charge system RVE-2 is an electrical and mechanical set able to offer charge service safely both indoors and public places and hold a continuous use. recharge service. To accommodate this use and conditions the main body is stainless steel with quality painting and coating anti-graffiti. Overall protection is IP54.

Charging systems MODE1 model, the hat can be hat can be seen and in its upper position allows access to the connection area and at its lowest position protects the connectors and prevents tampering.



With the energy stored in the spring [4] the hat can gets up, which the user previously had supplied closing the post. The hat keeps closed by an electromagnet [3]. When the reader recognizes a card and it is valid, the electromagnet is deactivated for a 1s so the hat gets up.

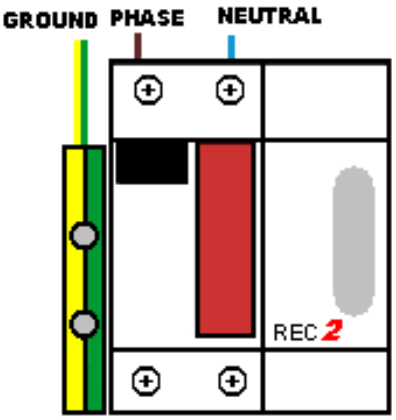
6.2 DISASSEMBLY

To get access inside the charger is necessary to open the back lid, depending on model, with Allen screws.

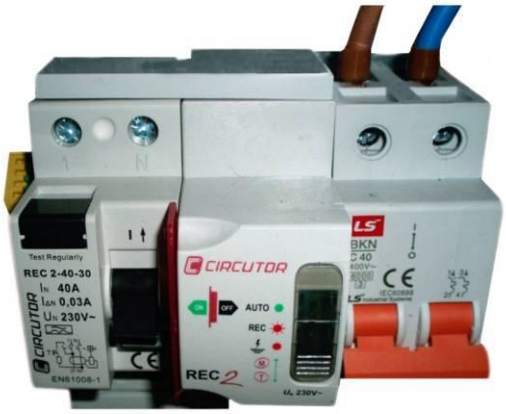
Once RVE is opened the electrical devices are able to be manipulated and the guidance system hat.

To continue with the removal, follow the following sequence:

1. Disconnect the power supply before disconnect electrical intervention. Only trained personnel are authorized, and with the precautions and appropriate personal protective equipment. Lock the main switch on the distribution main to avoid the self-reclosing of it or by others inadvertently. If necessary, include a warning note.
2. If it's not possibly to take the whole power supply, for example because there are others posts on charge, disconnect the power supply from local area through de RCCB REC2.



PHASE NEUTRAL



ATENTION WITH THE REC2 DISCONNECTION PROCESS!

a. It has to be active removing the protection cover to the right (in that way it wont restart), and then pressing the test button. This test will show if the RCCB works correctly (sensibility). Is recommended to do in each intervention.
b. If the RCCB has not jumped, stop until the fault has been repaired by trained personnel. Remember that the test button does not work if the residual circuit breaker is not powered.
c. Leave the REC2 red cover on the right during the operation.
d. Remember that the REC2 input terminals can be powered so it has to be careful to avoid manipulation closer it. Do not do any operation if there are faulty cables, insulation damage or vulnerability of any party liable to be powered.

2. Disconnect the ground cable with ring terminal connected on the axis end [5]. Do not allow to fall over the screw.
3. With one hand get down the hat making accessible the elastic ring [2] on the end of the drive shaft [5] and keep it there. With the other hand take out the elastic ring with a screwdriver [6] and the shock absorber top [1].
4. Leave the hat slowly. Attention with the resort is not projected out; even the stored energy is low. Now all the mechanisms of team are accessible.

6.3 ASSEMBLING

1. Carry out the same steps in reverse order of removal. The elastic ring can usually be easily assembled by hand.
2. DO NOT FORGET THE GROUND CABLE RECONNECTION after the elastic ring assembling [5].
3. To proceed to testing REC2 should be reconnected again.
4. ATTENTION WITH THE REC2 CONNECTION PROCESS!

a. If the power supply was cut upstream, supply the devices to test the RCCB. If it is not possible to supply it just raise the handle to rearm the REC2 and move the red protection cover to the left.
b. Replace the cover and set it correctly. If there is power, we will use to test the function of the REC2 reset before the end of the operation. After a few seconds, the REC2 should reset itself.
c. If long time passed between the disconnection operations REC2, should do the sensitivity REC2 test again as indicated in the previous section. Proceed to press the test button. If all is correct, the REC2 automatically reset after a few seconds.
d. If keeps not running, treat the incident as a failure, with the protocol established by those.

5. Replace the lid and set it correctly.

6.4 PREVENTIVE MAINTENANCE

The recommended preventive maintenance and his frequency is the following:

6.4.1 Monthly:

- Sensibility test.

Make sure that the RCCB works correctly. We recommend test it causing a current leakage in one plug (is not necessary to test it on both).

The test can be done to different ways to choose:

1- Open the lid and get into de REC2. Press the test button, if it reset itself it runs correctly.

2- By a deliberated leak through a special device able on request. This works by a switch which causes a current leakage. When the pilot is lit, pressing the button for approximately 1s, the REC2 should be jumped. Then give up the button. The hat has to be moved up so you can remove it without problems. After a few seconds REC2 restart and will be displayed the two-digit display version number of firmware. Move down the hat. The test is finished.

6.4.2 Yearly:

REMEMBER TO REMOVE POWER!

- Do the monthly REC2 preventive maintenance.
- Check the electrical wiring is correctly, there are no obvious faults in the insulation or defects on the components.
- Check the proper tightening of the screws on the power components, especially the REC2 and circuit breakers to which access is provided. Use the right tool on each case.
- Move down and leave the hat to get up. Look at the shock absorber if it's soft enough and his movement too. If necessary do a test twice. Check the movement peaces and the shock absorber.

  - If the shock absorber is not enough, proceed to replace it
  - It is not necessary use a lubricant in any movement parts.

- General cleaning on the electrical components area and the lower hat area. Remove with a brush the dust. Clean inside the card reader with the brush or o tissue.
- Check the connection state base is correct.

6.5 CORRECTIVE MAINTENANCE

6.5.1 Problems – Causes – *Solutions.*

- HAT PROBLEMS ASSOCIATED
    - If it sometimes necessary to exert a light force (at the time the card is inserted) for takeoff, then open it normal then the electromagnet [3] has remanence. *Solution: Replace it.*
    - If the hat doesn't get up itself is because it is assembled incorrectly or the resort is deteriorated [4]. *Solution: Replace it.*
    - If the hat is locked, it probably shorted out the drive transistor. *Solution: Replace the main control card.*
    - If the hat makes noise when gets the top then it probably had damage the elastic limit [1]. *Solution: Replace it.*
    - If it can be removed the hat out of the post, then it has broken the elastic ring [2] or improperly installed. *Solution: assembly correctly or replace it.*
    - If the hat does not stay in its closed position, probably caused by one of the following anomalies:
        - Dirt between the electromagnet and the board. *Clean the area.*
        - It has been interrupted internal electromagnet winding. *Solution: Replace it.*
        - The transistor who supplies the electromagnet crashed. *Solution: Replace the main control card.*
- METERING CURRENT PROBLEMAS
    - If no credits discounts despite consumption. Then the toroidal transformer is probably assembled incorrectly. *Solution: Check and correct if necessary.*

It could be problems with the corresponding card energy control (the main or auxiliary). If it is appropriate replace it, remember that it must also replace the corresponding toroidal transformer. Attention to assembling the toroidal transformer because it has polarity. The ground wire must pass the toroidal brown side.

It is also important whatever the type of electronic card to replace, to verify that the original bridges have inserted, and reproduce in the spare card. Do not replace any card under supply or with a different type.

- If there is no reaction when the card is inserted, and the hat is still down, probably it not recognize the card or it is empty.

- COMUNICATION PROBLEMS (MOV, IP o COM Posts)

The communication follows always the same order:

X2 communicates with R-440. R-440 communicates with modem. Modem communicates with the network. Obviously the posts which don't have R-440 or modem do not apply to them what is said.

- Behind a communication interruption check as the following order, depending with the material that the RVE-2 incorporates:
  - The COM led of the X2 card Works correctly (see on electrical wirings peg.). The communication with R-440 works when is flashing.
  - When the R-440 communicates with the X2, the led Tx and Rx are flashing.
  - I case that doesn't work, check the twisted cable Rs-485 has reliability and is will connected.

    - Terminal A = (+), Terminal B =(-)

  - Check the R-440 configuration is charged correctly. It is necessary to know the PowerStudio and connect by modem or Ethernet cable (inverted).
  - Check there is 3G or GPRS coverage, and if this is the case, the correct modem configuration. Communication with the modem can be done through an antenna or cable (not invested in this case). The configuration is described in the manufacturer's website:
  -
  - http://www.sierrawireless.com/productsandservices/AirLink/Intelligent_M2M_Gateways/AirLink_Raven_XE.aspx

    , or in the CD that comes with the modem, and depending on the telephone company SIM contracted.

- OTHER PROBLEMS
  - If the hat keeps up even when you try to get down and there is nothing displayed when a valid card is introduced probably there is no voltage. The REC2 jumped or the power supply has been interrupted upstream.
  - If the charge does not start having performed well it is probably missing the microswitch that detects the position of the hat secure (closed).
  - When charge is requires and there is a rC on the display it is not a real problem. The charge does not start because the card is recovering the credit. That credit was saved because the previous load that card ended incidents.

6.6 SPARE PARTS AND RECOMMENDED TOOLS

The required tools to perform proper preventive or corrective maintenance are the normal installation electrician. The PPE (Personal Protective Equipment) are also common, and should be designed by the Prevention Service employee responsible who makes the assistance.

The following mentioned tools are the only not commonly used:

- Flat brush with long hair.
- Special tool to cause a current leakage.

The amount and type of recommended spare parts are described in the following list:

- Main card control. If this card is replaced, also replace the toroidal. The spare card brings its own toroidal. We recommend having 1 unit per 10 RVE-2.
- Auxiliary card. If it is replaced, also replace his toroidal. The spare card brings its own toroidal. We recommend having 1 unit per 10 RVE-2.
- Plug bases. We recommend having 2 units per 10 RVE-2.
- REC2. Check the sensibility of the RCCB is 30mA. (=0,030A). We recommend having 1 unit per 10 RVE-2.
- Circuit breaker. We recommend having 2 units per 10 RVE-2.
- Power relay. We recommend having 2 units per 10 RVE-2.
- Overcurrent protector. We recommend having 2 units per 10 RVE-2.
- Shock absorber limits, retaining rings and washers. Is the material which has a mechanical weak before. We recommend having 10 units per 10 RVE-2.
- Allen screws of the lid. We recommend having 30 units per 10 RVE-2.
- Electromagnet. We recommend having 1 unit per 10 RVE-2.
- Rotary microswitch. We recommend having 2 per 10 RVE-2.

6.7 AUTO-DIAGNOSTIC. DISPLAY CODE

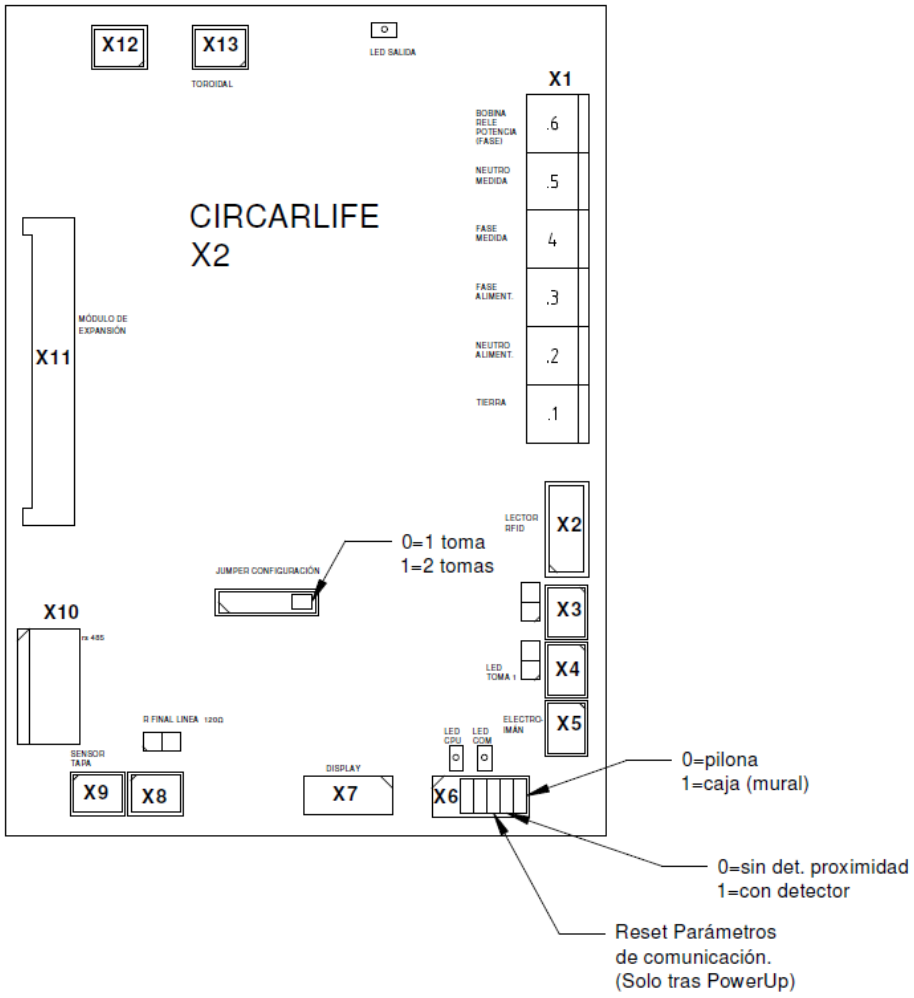
2 9	Software version is displayed for 1 second after unit is connected to the electrical supply
8 8	Indicates credit avalible when the RFID card is presented to the card reader. Example '88'
9 9	When the credit number is flashing '99' this indicates that the credit value is greater than 99
L	Socket 1. Allows charging regardless of avaliable credit. This option only works with a suitably formatted card and the correct software upgrade in the charging equipment
L	Socket 2. Allows charging regardless of avaliable credit. This option only works with a suitably formatted card and the correct software upgrade in the charging equipment
H	Socket 1. 'H' indicates that the charging unit has reached the preset time limit. This feature can be enabled or disabled by the factory using the charging equipment software
H	Socket 2. 'H' indicates that the charging unit has reached the preset time limit. This feature can be enabled or disabled by the factory using the charging equipment software
o	Socket 1. '0' flashing indicates the charging unit has reached the preset time allowed for a minimum charge
o	Socket 2. '0' flashing indicates the charging unit has reached the preset time allowed for a minimum charge
.	It draws a card of the channel 1, properly updated or insert a card that is not correct
.	It draws a card of the channel 2, properly updated or insert a card that is not correct
-	Socket 1. A segment fixed in one position indicates there is no load. When the segment is rotating it indicates charging. The speed of the rotation indicates the amount of load
-	Socket 2. A segment fixed in one position indicates there is no load. When the segment is rotating it indicates charging. The speed of the rotation indicates the amount of load
r C	Credit recovery failed in a previous cycle. Reset the system
E 1	Communication failed with RFID card reader
E 2	RFID Reader unable to read card
E 3	*Not Used*
E 4	RFID Reader unable to write to card

The information that appears briefly in the card reader display shows the firmware version number, i.e. 29 is version 2.9.

Errors "E1, E2, E4" have automatic recovery.

6.8 ELECTRICAL WIRING

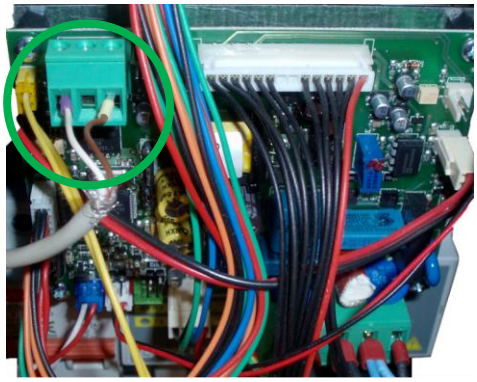
X2 Card. Topographic distributions



1. Rs-485 twisted cable connection:

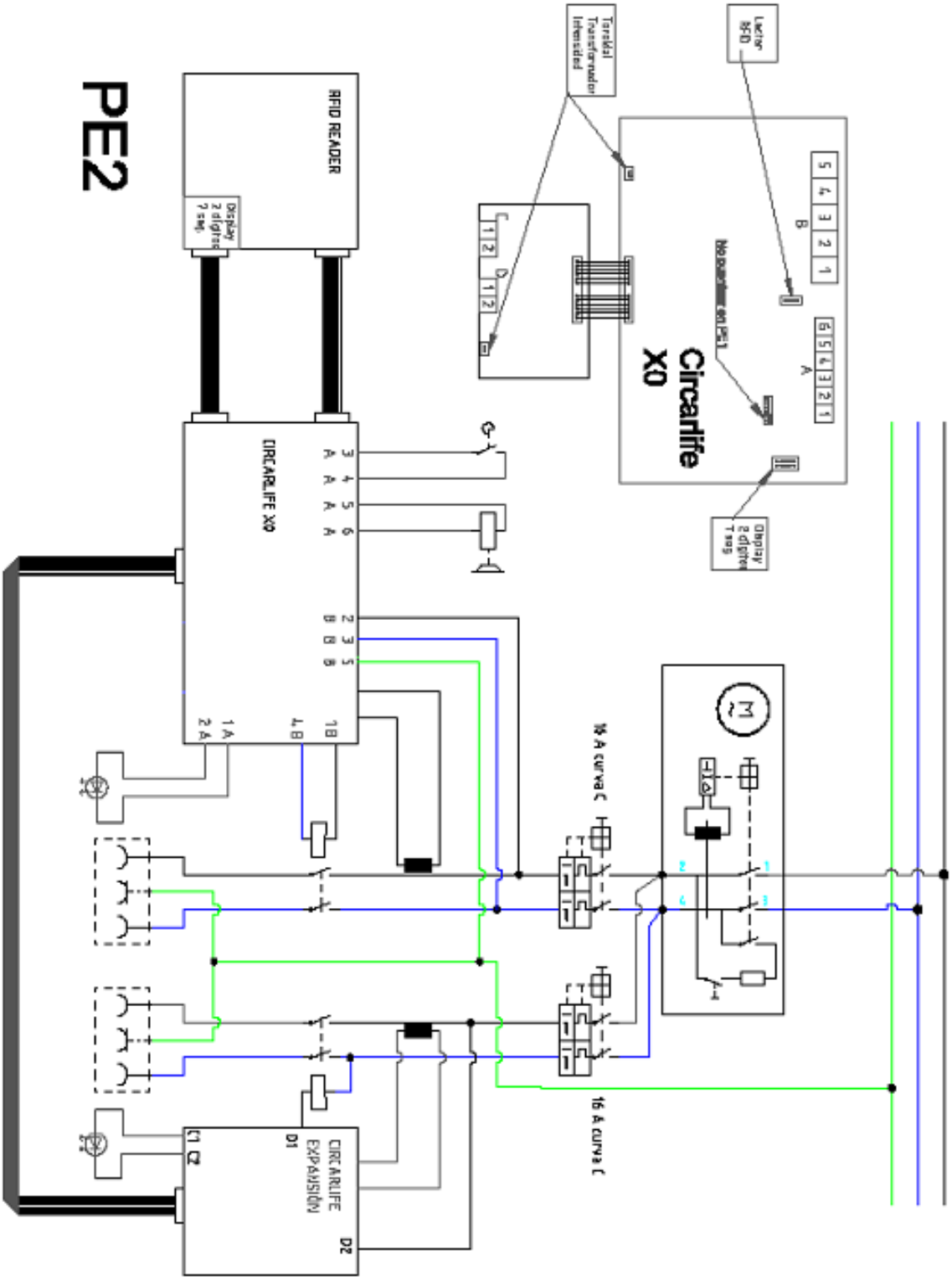
Terminal A (brown) = (+)
Terminal B (white) = (-)

RS-485 TACHNICAL CHARACTERISTICS	
Speed	57600bps
Default address	A98
Default nº of nodes	98
Stop bit	8n1

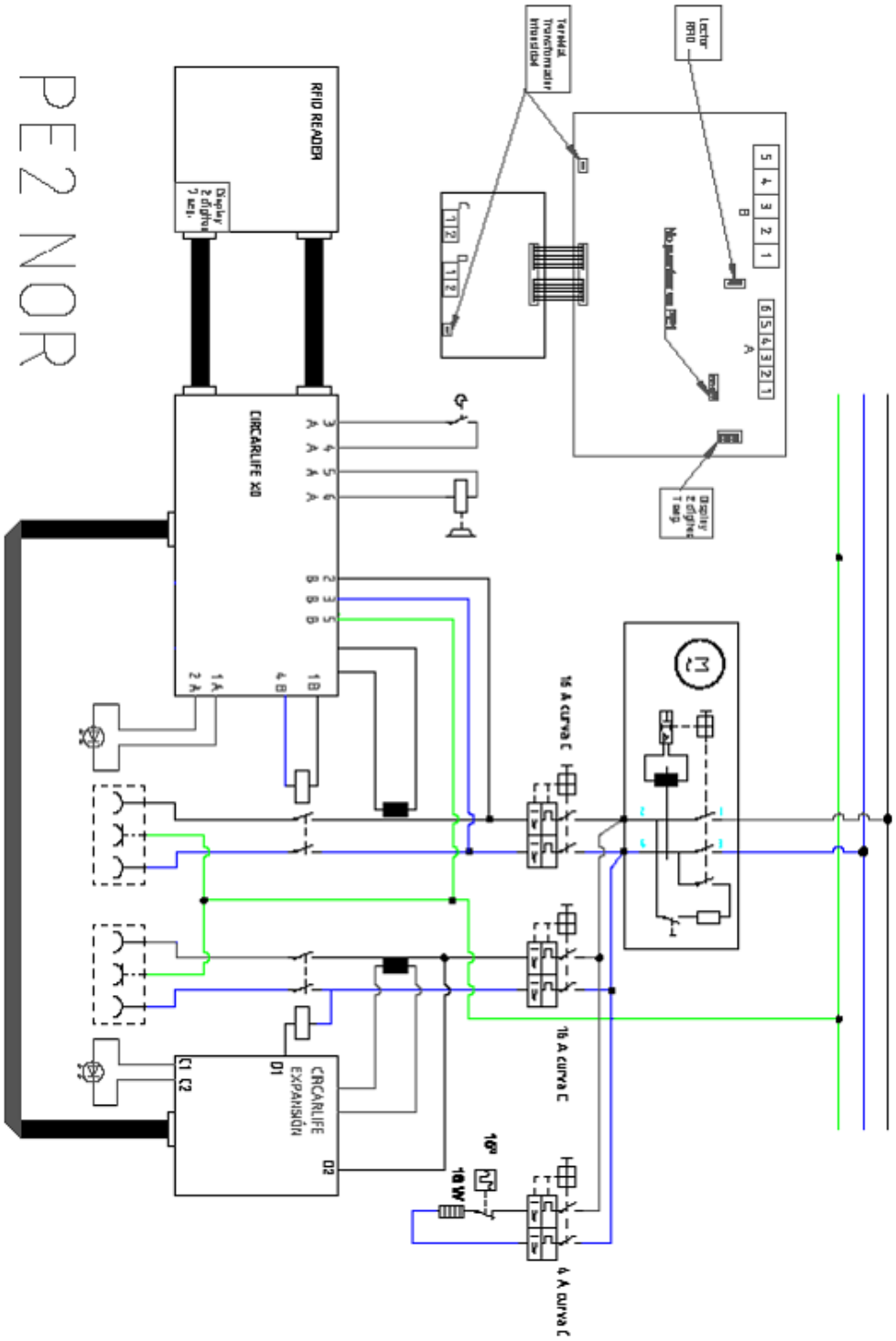


The number of nodes must be changed when it is integrated into a network by factory default is set at 98, the same goes for the direction of the RS-485.

RVE-2 (X0 card), Outdoor recharge posts with 2 outlets - mode 1

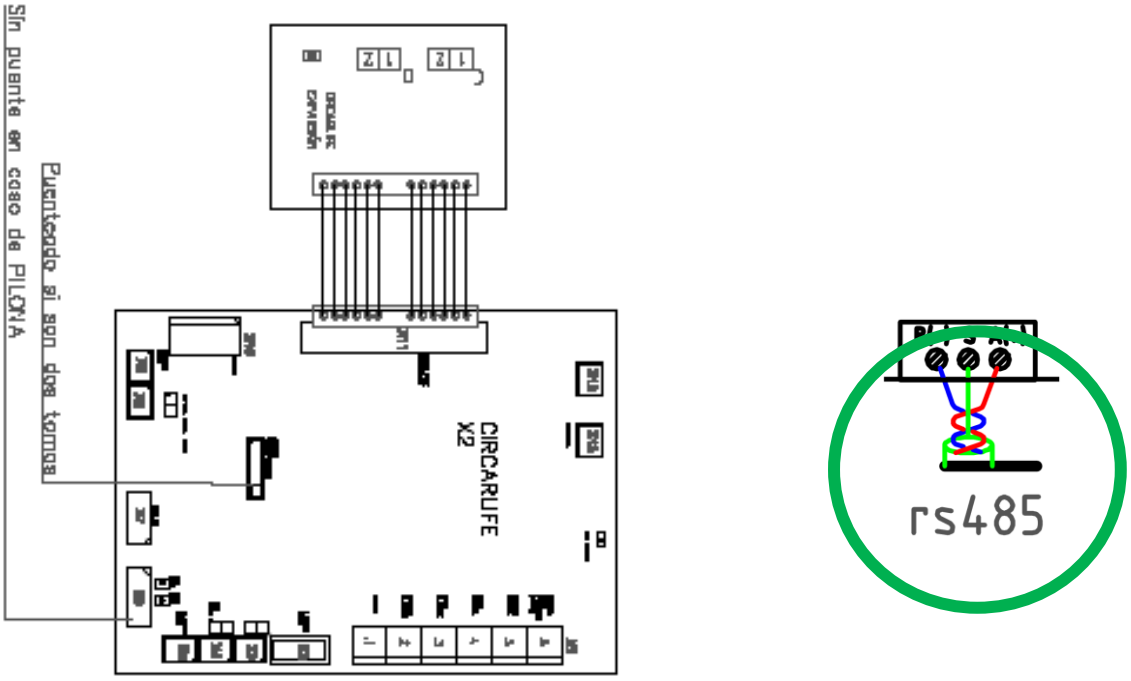


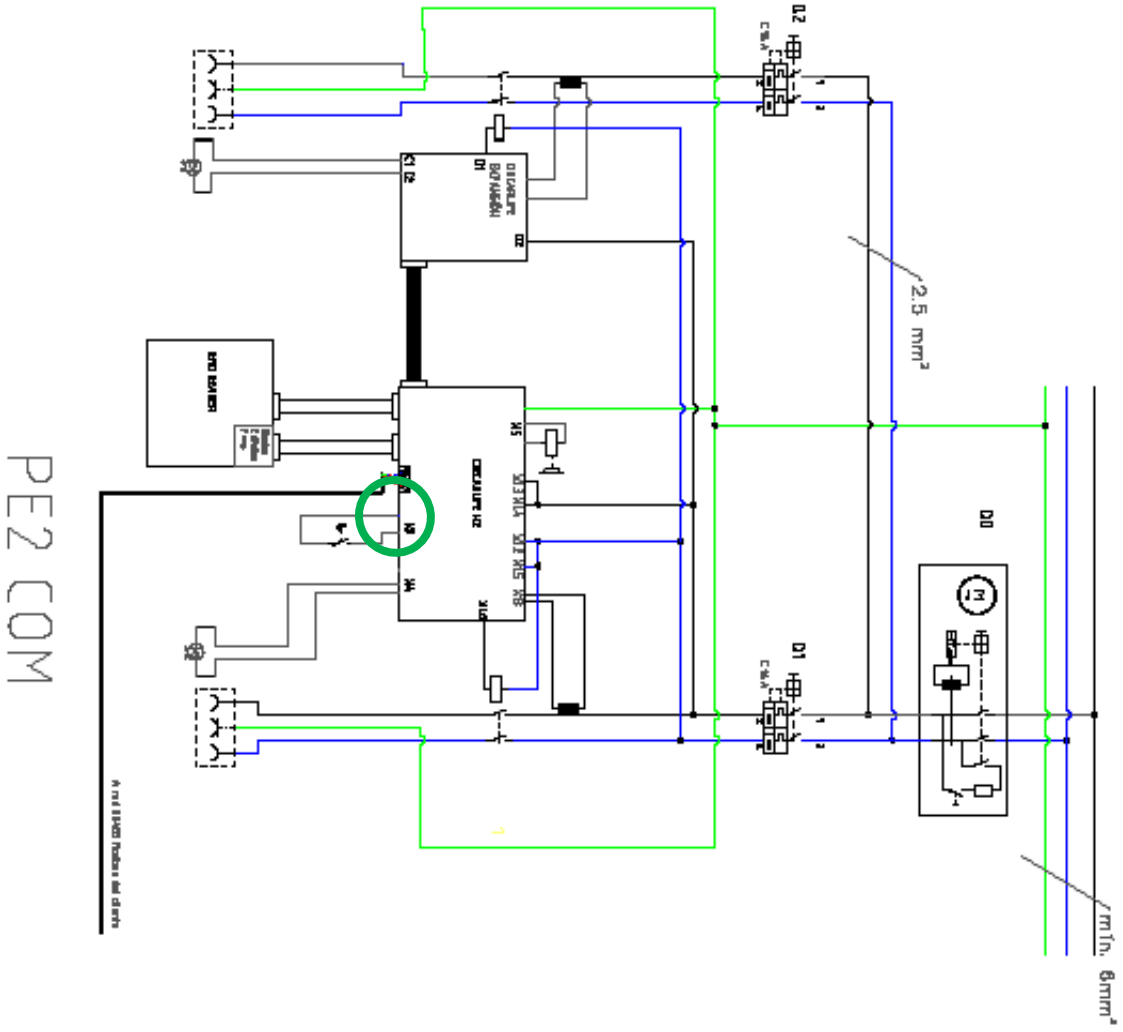
RVE-2 (X0 card), Outdoor recharge posts with 2 outlets - mode 1 + Resistance



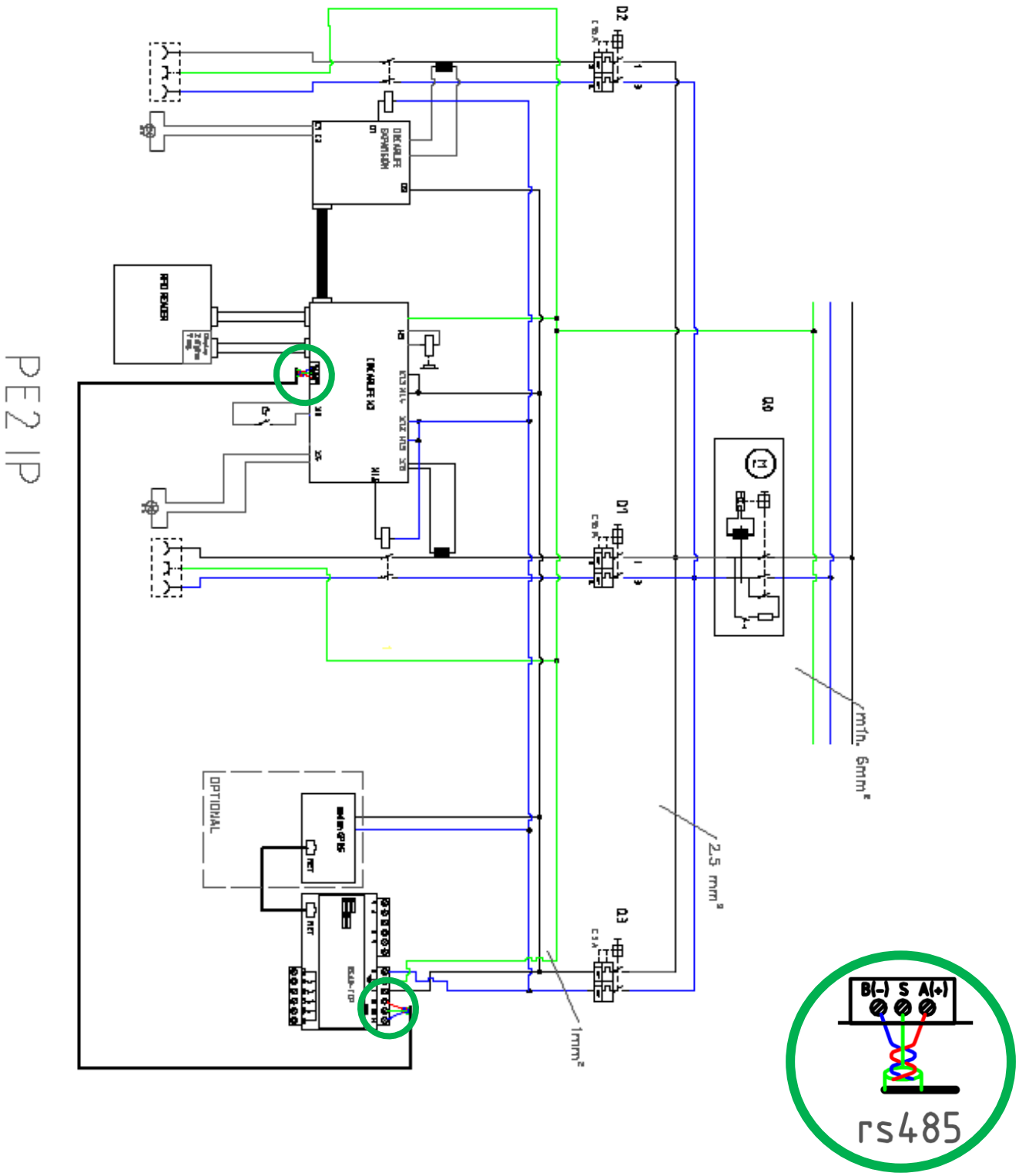
RVE-2 & RVE-2 COM (X2 card) ,

Outdoor recharge posts with 2 outlets - mode 1, with communications

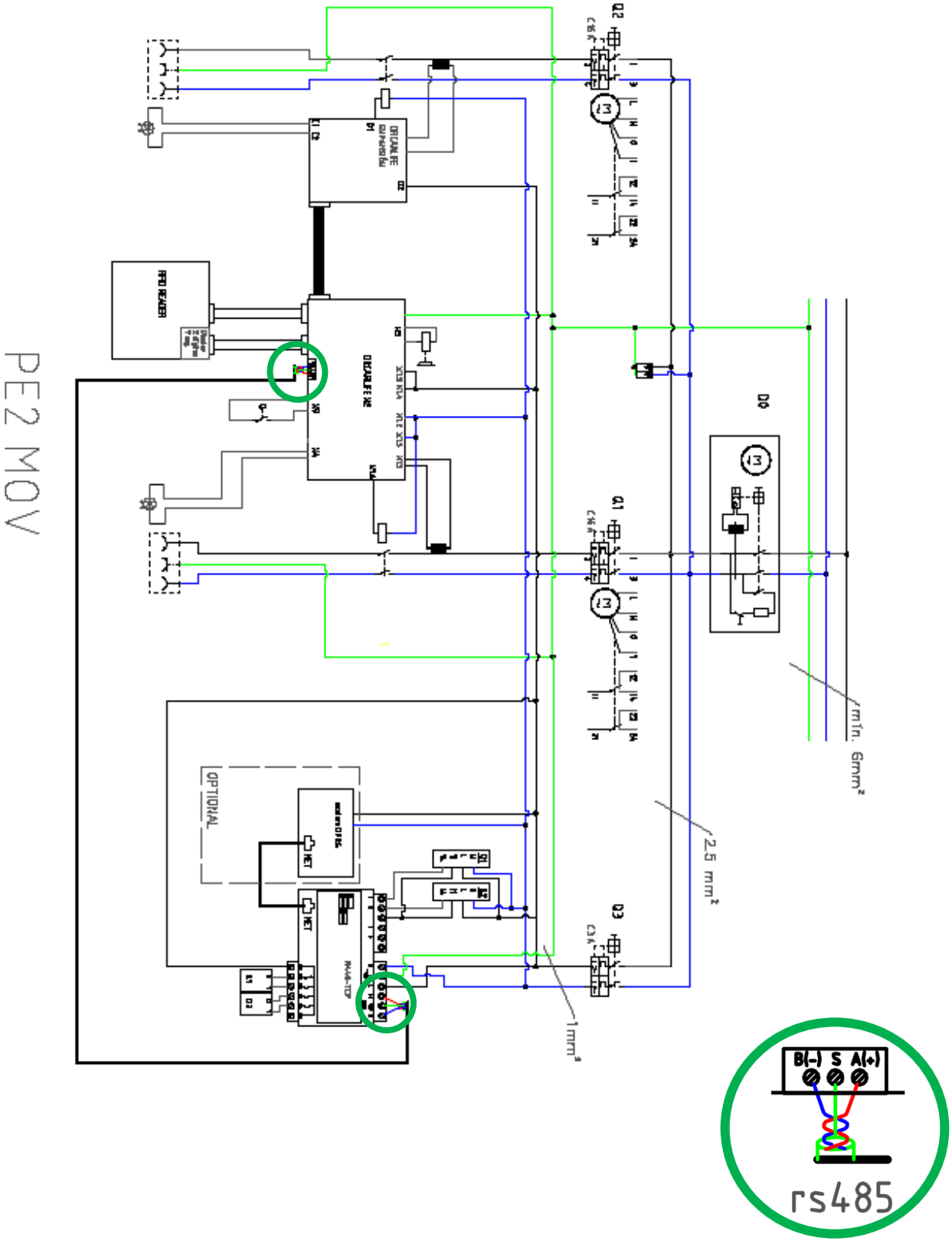




RVE-2 IP, Outdoor recharge posts with 2 outlets mode 1, with communications



RVE-2 MOV, Outdoor recharge posts with 2 outlets mode 1, with communications



7 TECHNICAL DATA

Input voltage	230Vc.a., ± 10 %
Rate input frequency	50 …60Hz
Output voltage	= input voltage
Current metering	integrated meter
RCCB	30mA 40A self-reclosing
RFID reader	ISO 14443A
Temperature range	-10…60 °C
IP protection	IP54
Enclosure	INOX AISI 304, 2mm thickness
Surface	RAL 9006 gray polyester
Input voltage	230Vc.a., ± 10 %
Maximum consumption	7.2kW
Connector	2 x SCHUKO 16A
Dimensions	Φ 214mm, 1230mm
Weight	24,7 kg

8 TECHNICAL SERVICE

In the event of any equipment failure or any operational queries please contact the technical service of CIRCUTOR S.A.

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